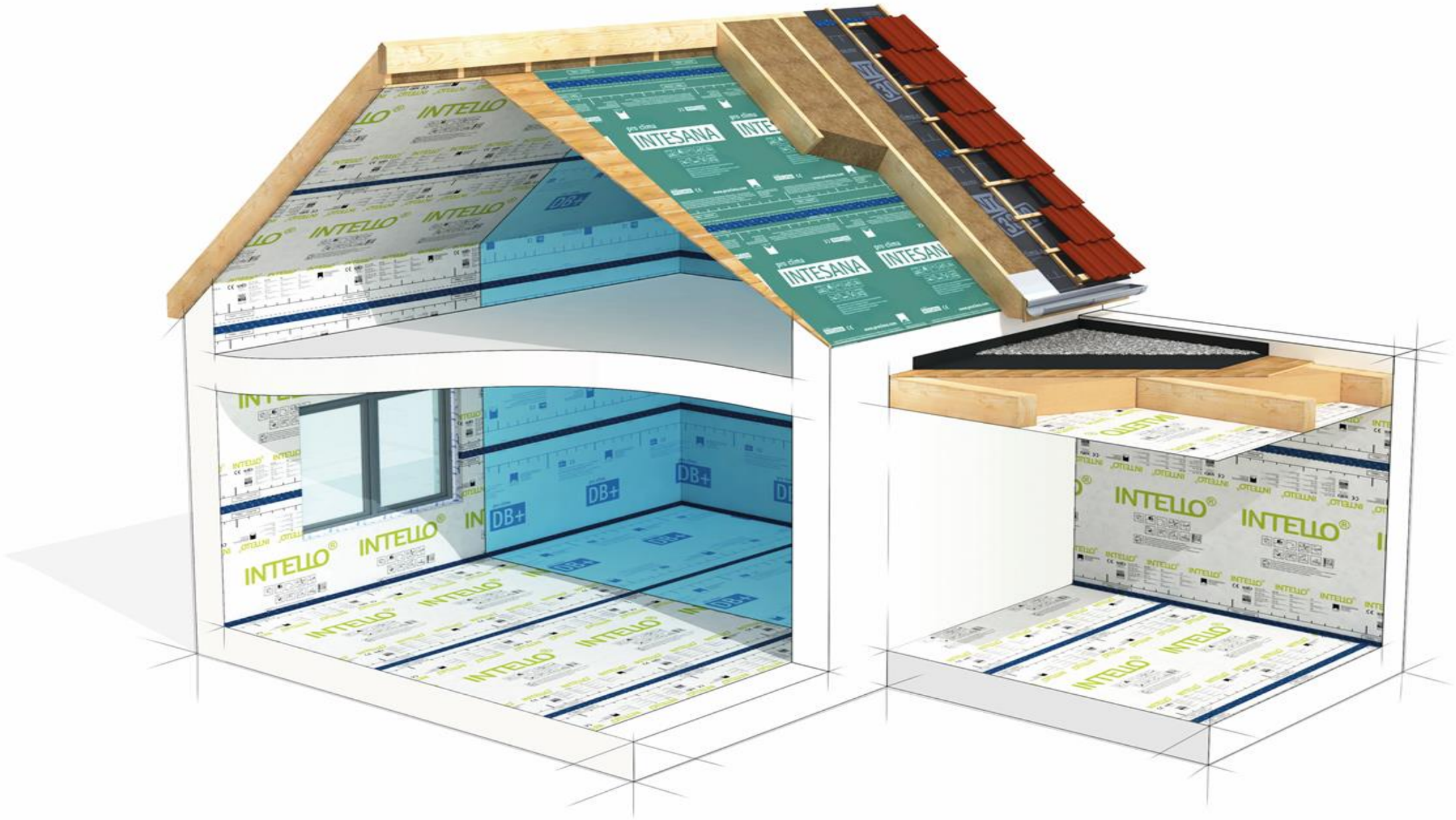
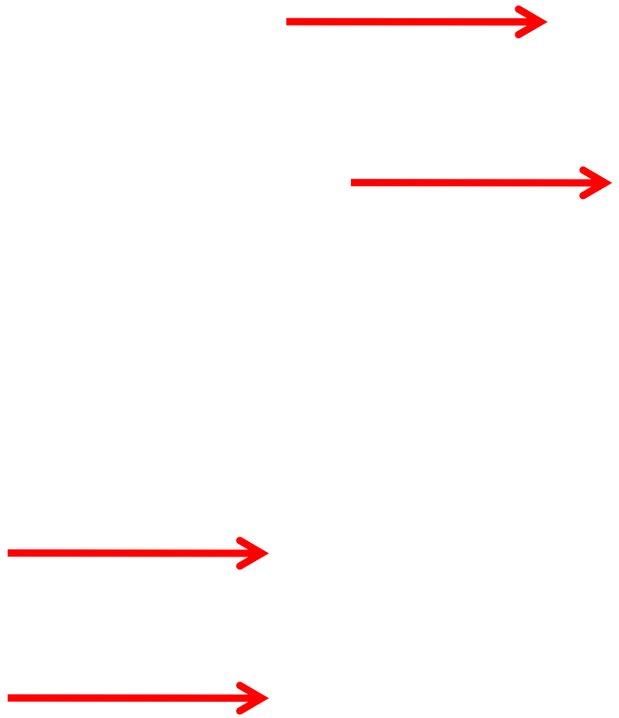

pro clima®
...and the insulation
is perfect


INTELLO®
DB+
pro clima
INTESANA

The principle of insulation



insulation

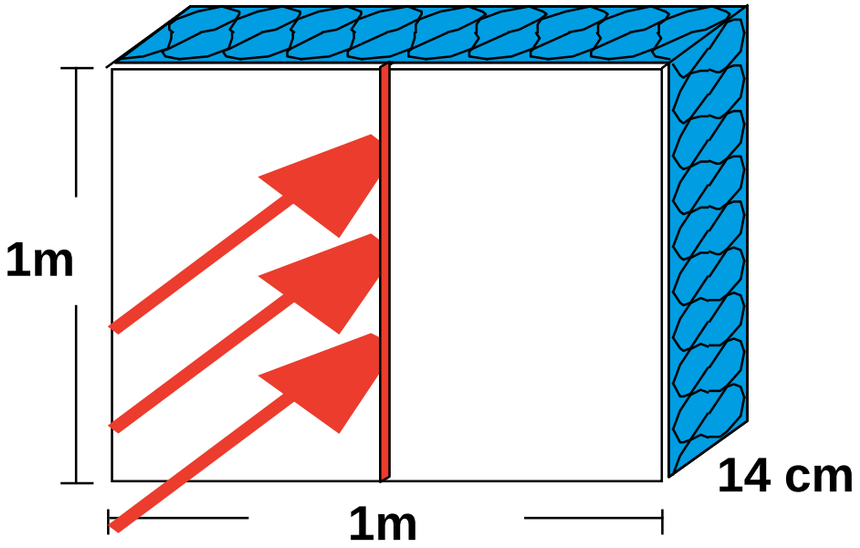
=air in small chambers/inclusion of pores

air movement

=heat transport

Only inclusions of air that are protected against air movement insulate!

Heat losses – due to air movements



Without gap: U-Value = 0,3 W/m²K

With 1 mm gap: U-Value = 1,44 W/m²K

Performance down by factor 4,8

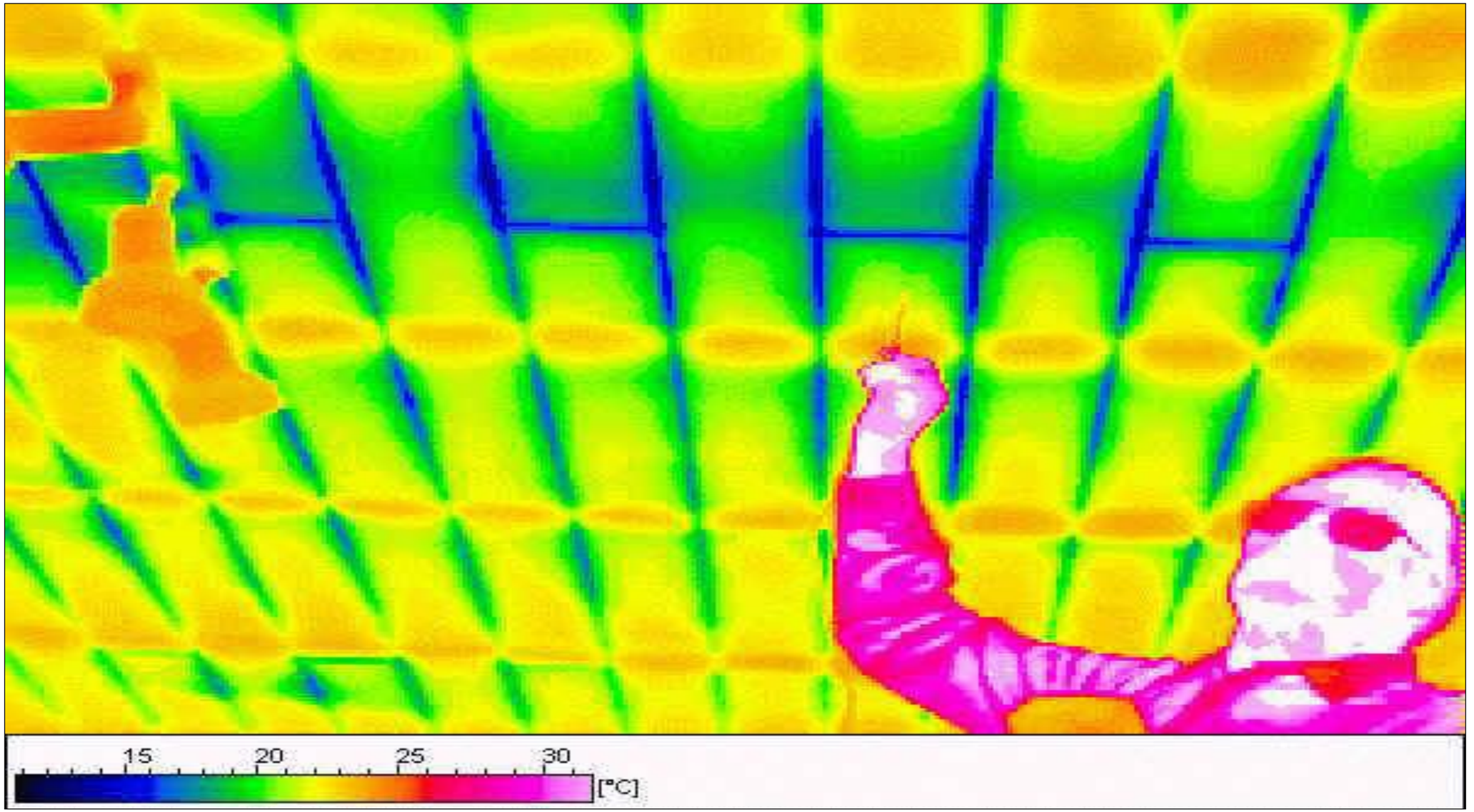
Experiment set-up

Construction of insulating material

Gap in the vapour seal
(air-tightening).

Frame conditions:
Inside temperature +20° C
Outside temperature -10° C
Pressure difference 20 Pa
= wind force 2-3

Measurement:
Institute of building physics, Stuttgart
Source: DBZ 12/89, page 1639ff



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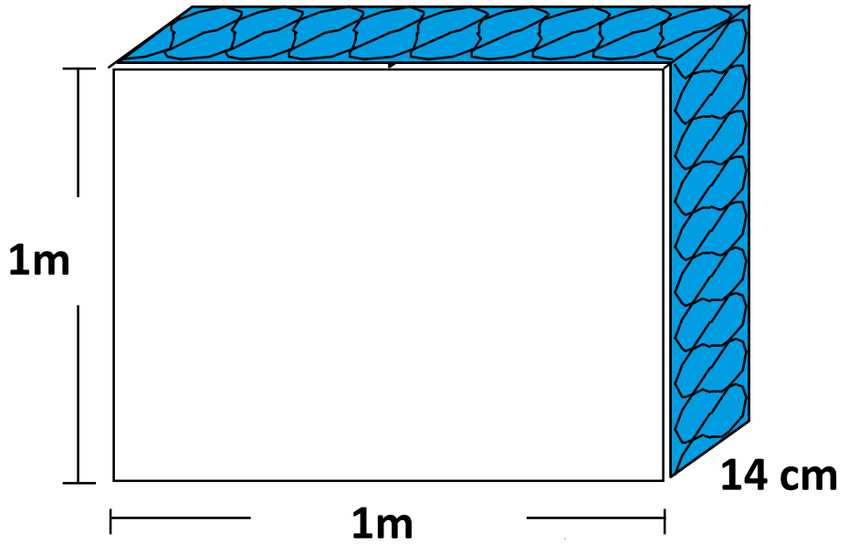
Structural damage due to moisture

Winter - condensation on the outside of the construction

Summer - condensation on the inside of the construction

Possibilities for moisture load to the construtions

1.) Diffusion



Without gap: 0,5 g water/m²x24h

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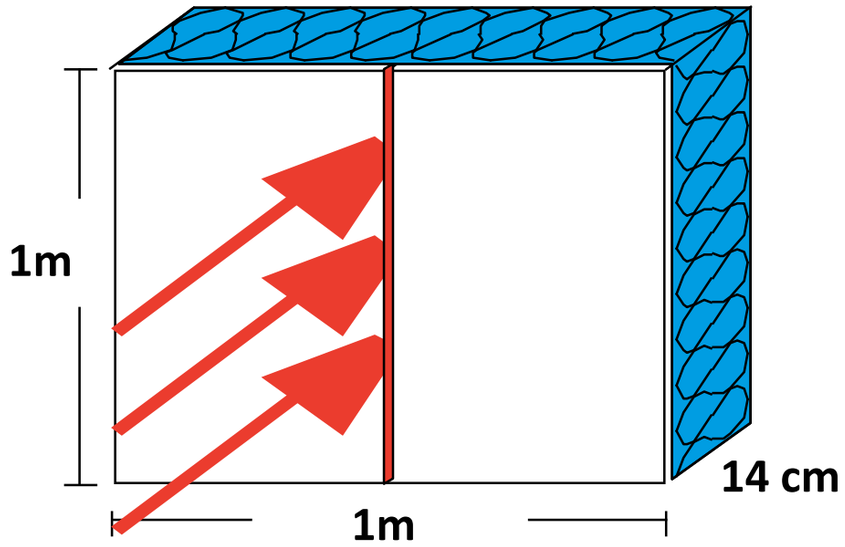
Possibilities for moisture load to the constrution

2.) Convection

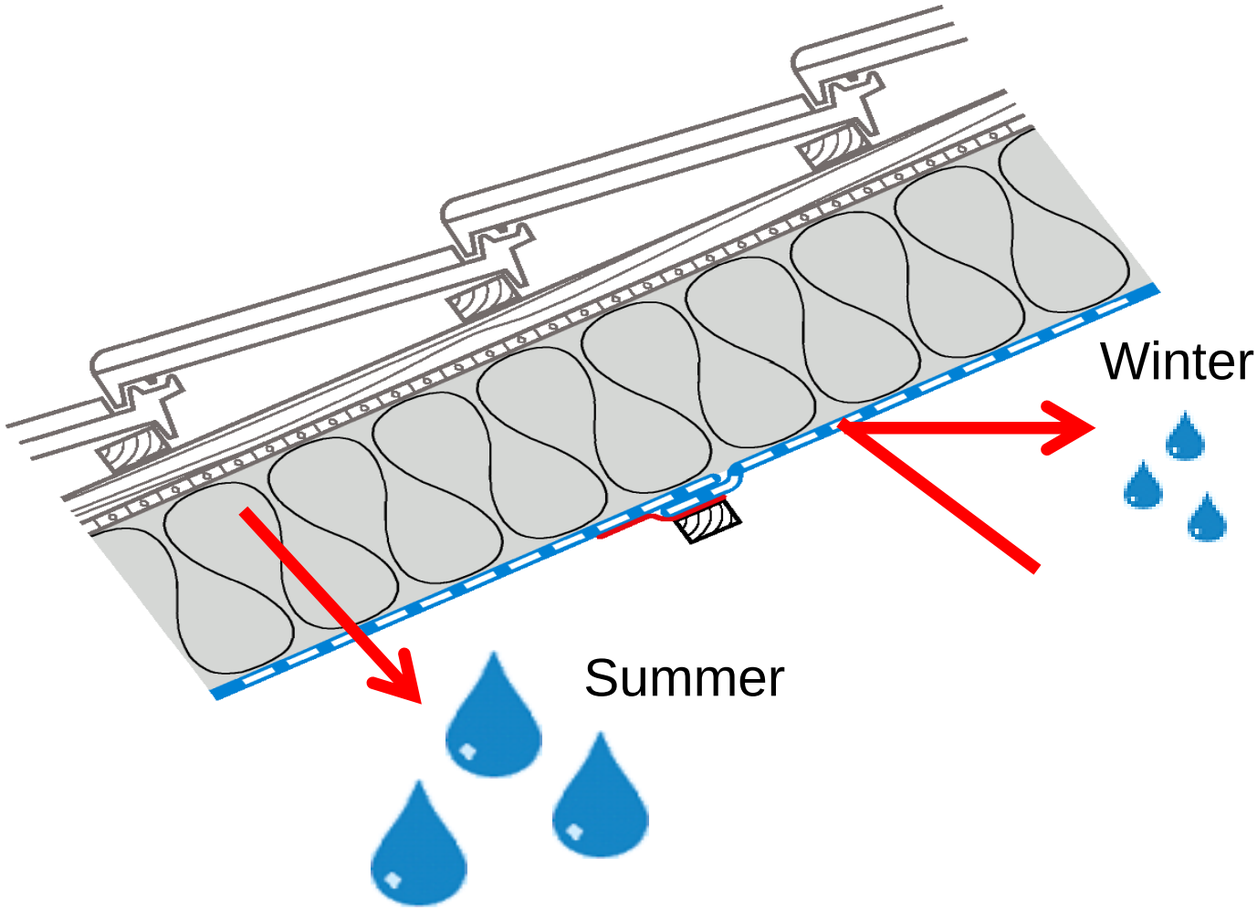


Without gap: 0,5 g water/m²x24h

With 1 mm gap: 800 g water/m²x24h

Performance down by factor 1600

Membranes with humidity – variable diffusion resistance

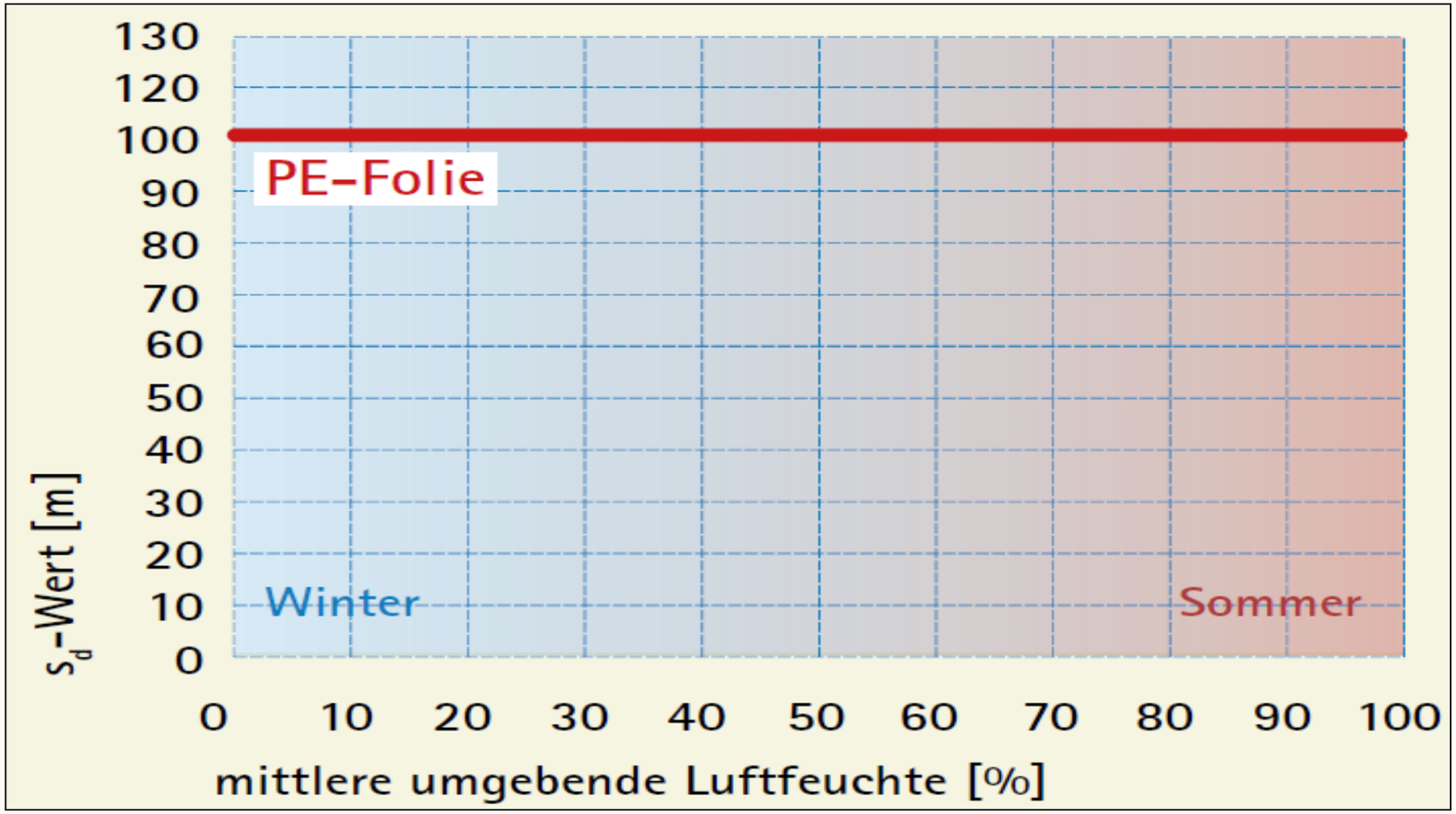


Freedom from structural damage due to vapour membranes with humidity – variable diffusion resistance

In winter: protection against moisture entry

In summer: high drying potential

Sd-value of normal vapour retarders with constant sd-value



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Building damage due to build in moisture

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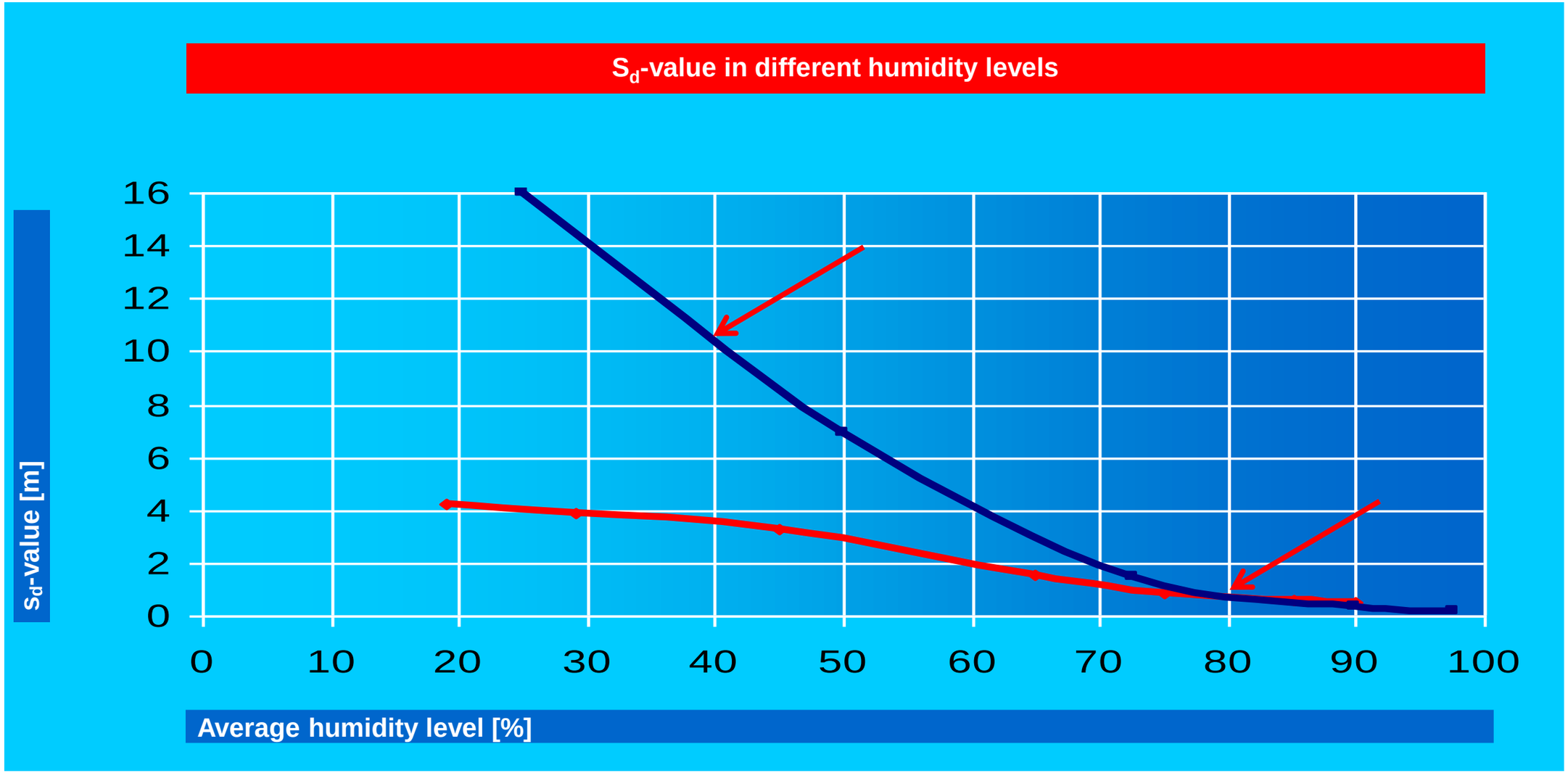
Intelligent vapour retarders



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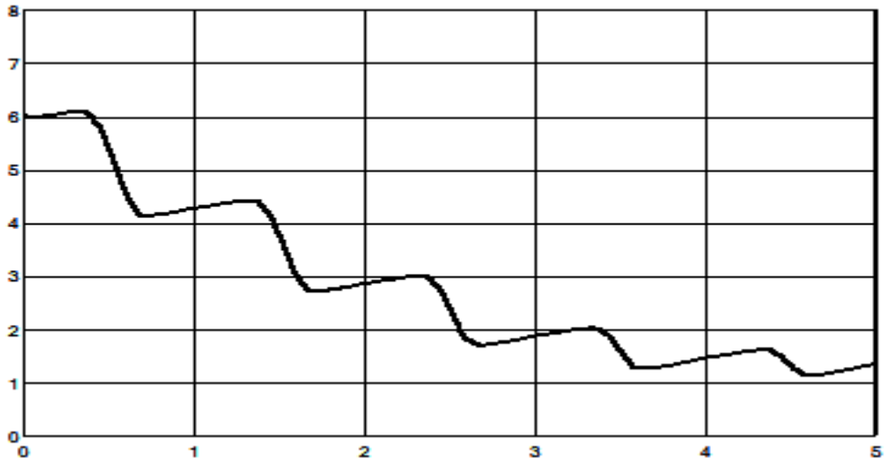
Stockholm roof – calculation freedom from structual damage



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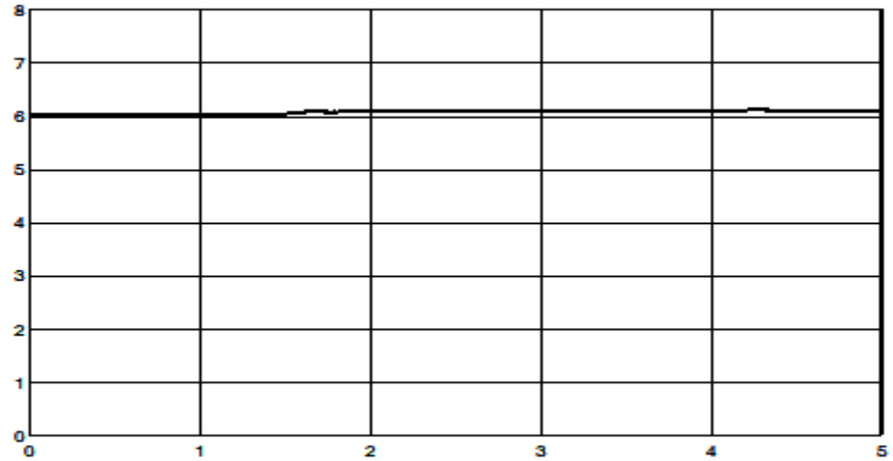
app. 1.100 g/(m²*a)

High security against unforseen moisture



PE sheet

app. 20 g/(m²*a)

No securities agains unforseen moisture

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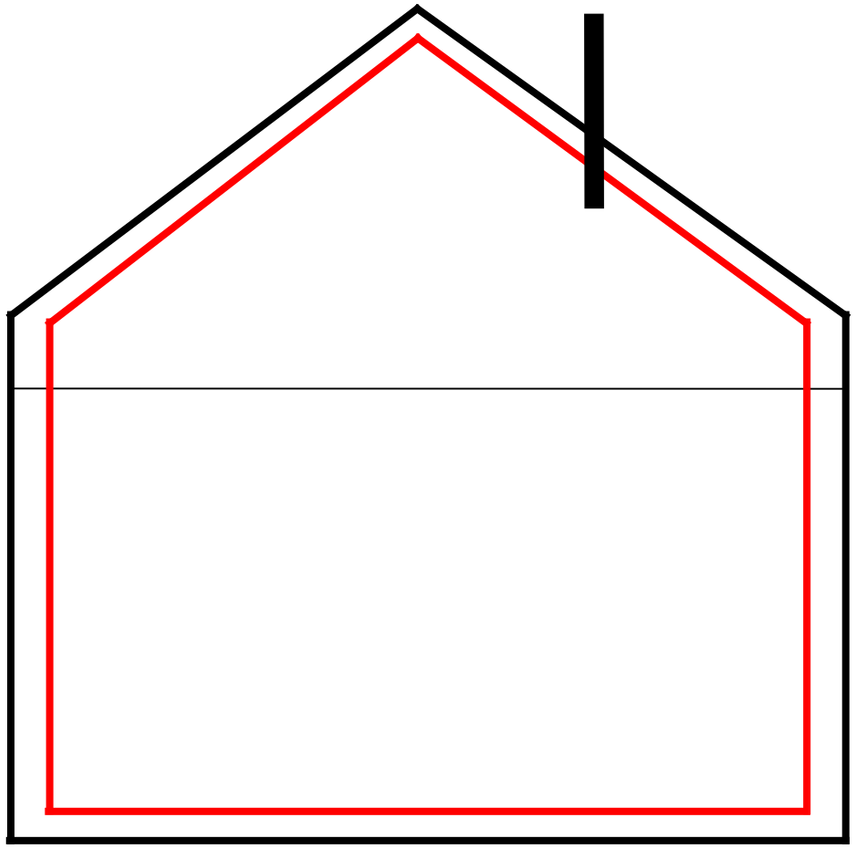
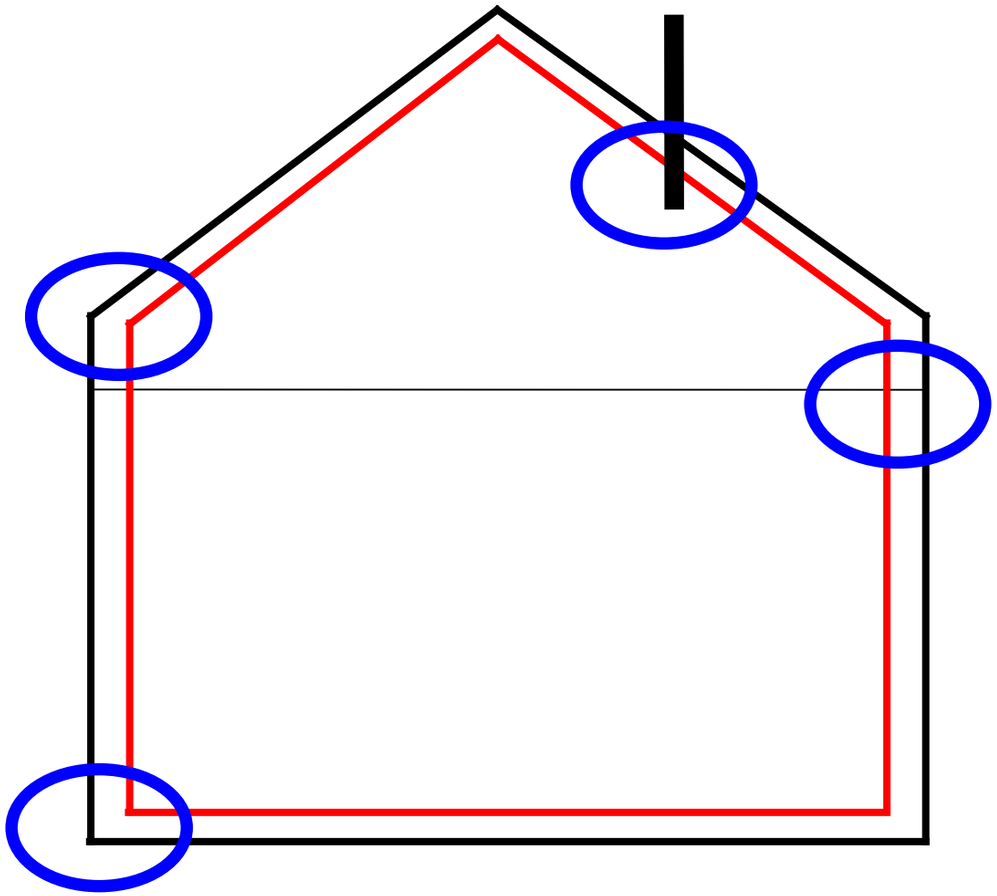
ZERTIFIZIERTE KOMPONENTE
Passivhaus Institut
MENTO 3000
Materialgarantie
INTELLO
ORCON
Schadstoffgeprüft nach
AgBB
100 JAHRE KLEBKRAFT
erfolgreich getestet
weltweit einzigartig
SENTINEL HAUS INSTITUT

Planning of airtightness – the principal



Planning of airtightness – the principal



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Membrane overlaps

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High quality tapes – durability – artificial aging

UNIKASSEL VERSITÄT

Untersuchung der Dauerhaftigkeit von Klebeverbindung für den Bereich der Luftdichtheitsschicht der Gebäude-hülle (nach dem internen Manuskript der DIN 4108-11 Stand August 2012) sowie weiterführende Messungen bis zu zwei Jahren beschleunigter Alterung.

ARCHITEKTUR STADTPLANUNG LANDSCHAFTSPLANUNG

Fachgebiet Bauphysik

Universität Kassel
Fachbereich Architektur Stadt und Landschaftsplanung
Fachgebiet Bauphysik
Gottschalkstraße 28
34109 Kassel

Univ.-Prof. Dr.-Ing. A. Maas

Tel.: 0561 804 - 3189
Fax: 0561 804 - 3187

http://www.bpy.uni-kassel.de

TESCON VANA

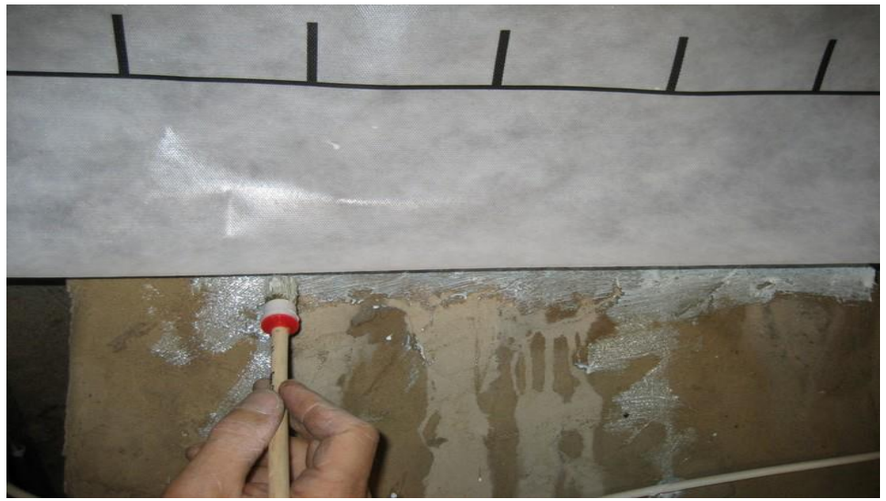
CONFIRMED BY TESTS

100 years

Permanent airtightness with pro clima!
Tested for the entire usage period

Demanding tests with increased test periods have confirmed the suitability of TESCON VANA, UNI TAPE and TESCON No.1 adhesive tapes for the creation of permanent airtightness which surpass the requirements of DIN 4108-7, SIA 180 and OENORM B 8110-2.
This confirms that vapour check and airtightness membranes and airtight wood-based panels can be reliably bonded using pro clima products!

TESCON PRIMER RP



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pro clima™

pro clima SPRIMER

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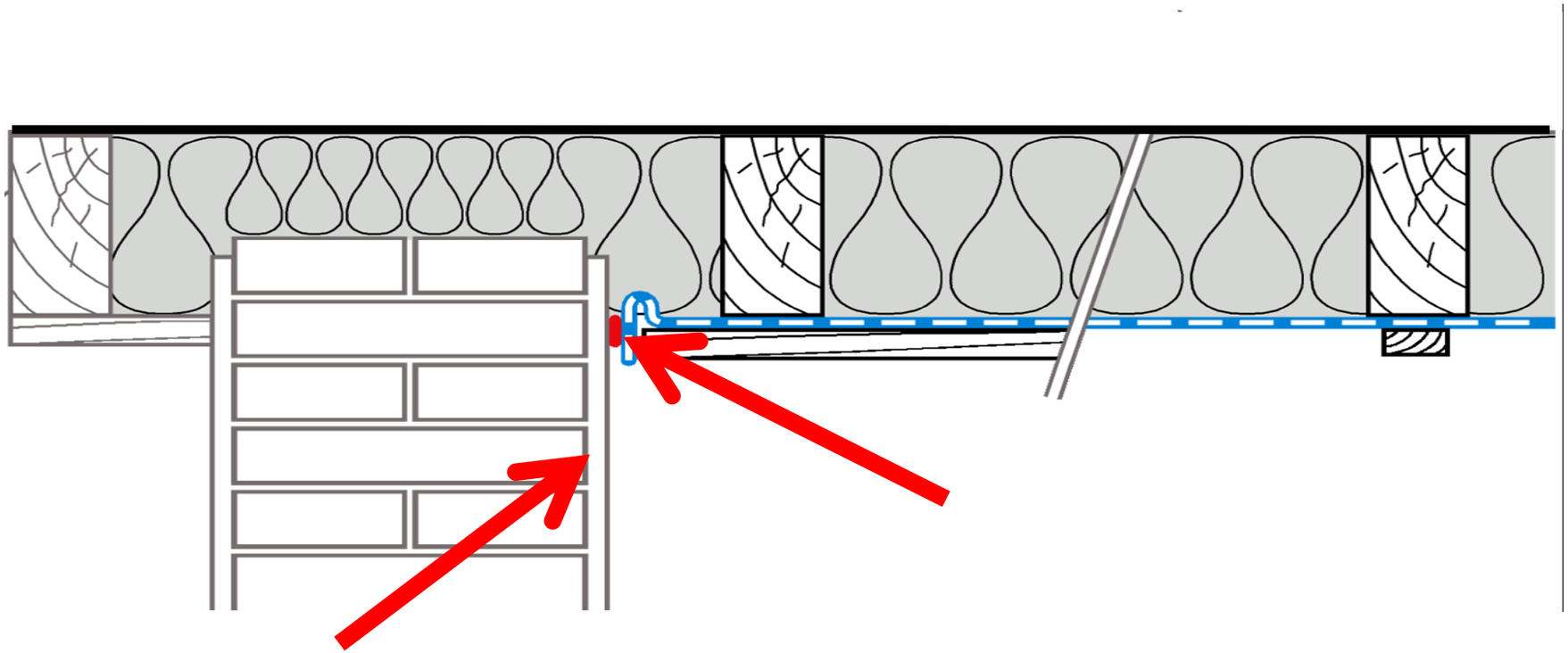
airtightness – connection membrane to rough surfaces



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airtightness – connection membrane to rough surfaces

airtightness – connection membrane to rough surfaces

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airtightness – pentrations of cables and pipes

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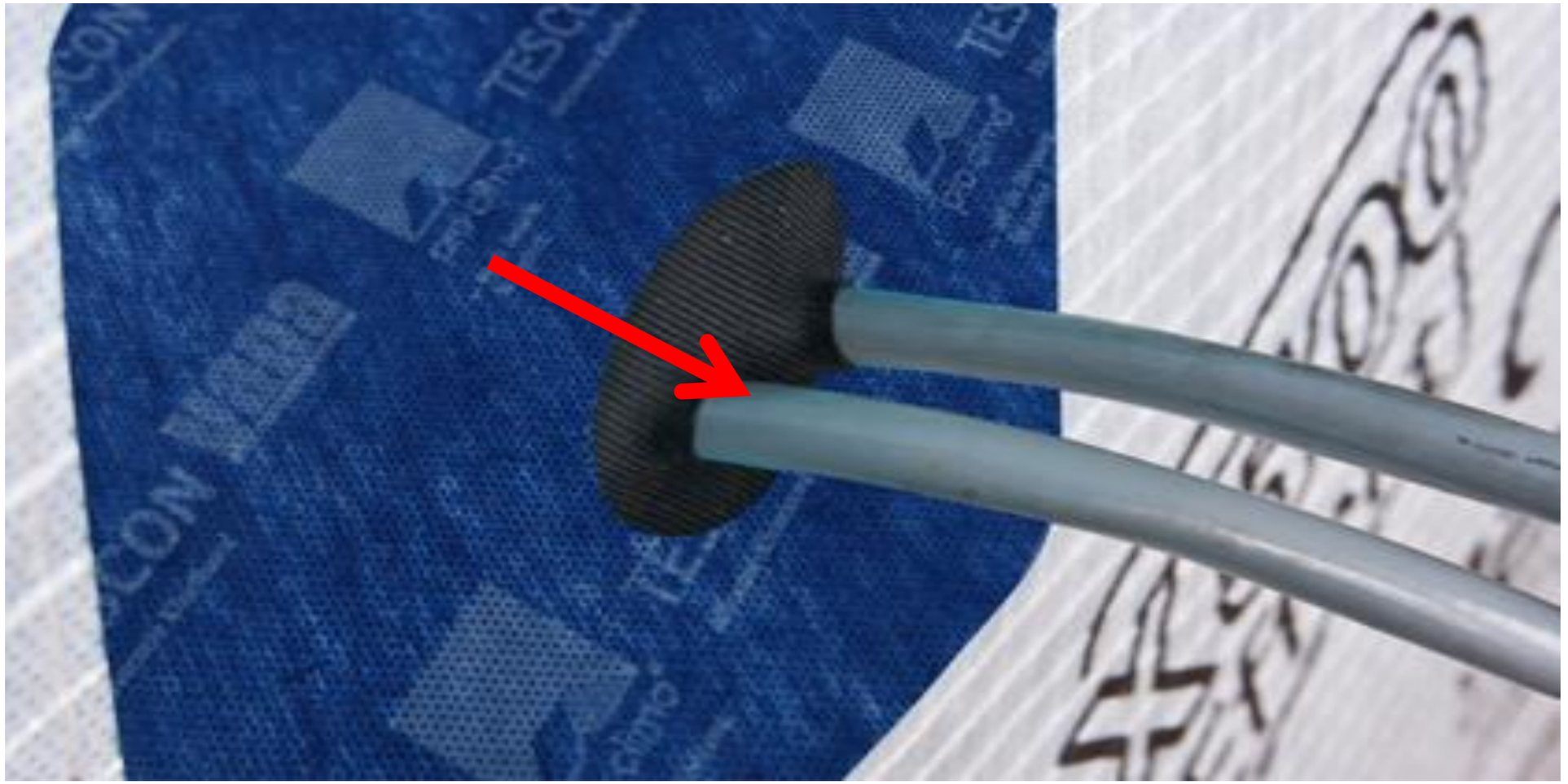
ROFLEX - pipe grommets

KAFLEX - cable grommets



Ductwork – plugs – pro clima STOPPA

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AEROSANA VISCONN – sprayable airtightness layer

AEROSANA VISCONN – sprayable airtightness layer

How to realise this connection airtight?

AEROSANA VISCONN – sprayable airtightness layer

How to realise this connection airtight?

AEROSANA VISCONN – sprayable airtightness layer

Connection CLT to concrete

AEROSANA VISCONN – sprayable airtightness layer

Connection CLT to concrete


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